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AUTHOR Clark, Pat, Ed.
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ABSTRACT

The three two-page briefs in this packet focus on the skills needed for America's workforce and student career aspirations. "What Do We Know about America's Workforce?" provides a statistical overview of the workforce and workers today, reporting the following: (1) the number of men and women in the labor force is about equal; (2) by the time their youngest child is 3 years old, at least 60 percent of mothers have entered or returned to the labor force, although many work part-time; (3) approximately 10 percent of workers are in nontraditional staffing arrangements such as independent contractors or temporary workers; and (4) median weekly earnings for full-time wage and salary workers in 1998 were $598 for men and $456 for women. "What Skills Are Needed for the Workforce?" paints a grim picture of the skills of high school graduates and offers 13 recommendations for improving curriculum and teaching so that students gain the skills they need in the workforce. "How Do Students' Career Aspirations Compare to Labor Market Realities?" reports that students' high career aspirations and educational plans far outstrip the number of college-graduate and professional jobs that will be needed when they graduate and recommends counseling students about developing occupational skills--above high-school level but less than a bachelor's degree--that will be most needed in the next 10 years. Each of the briefs includes reference lists. (KC)

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EQUITY

- WHAT DO WE KNOW ABOUT AMERICA'S WORKFORCE?
- WHAT SKILLS ARE NEEDED FOR THE WORKFORCE?
- HOW DO STUDENTS' CAREER ASPIRATIONS COMPARE TO LABOR MARKET REALITIES?

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What Do We Know About America's Workforce?

America's workforce is changing. The economy is strong, unemployment is low, technology and globalization are creating opportunities for businesses and entrepreneurs, the diversity of employees is increasing, and families are making choices to balance their work and family lives. Educators need to understand the trends and challenges the workforce faces as they restructure schools, develop programs, revise curricula, and teach students. The statistics below give a profile of the diversity of America's workers.

Research

By 2005, men are projected to comprise 52 percent of the labor force and women are projected to comprise 48 percent (U.S. DOL, 1999).

Ohio mothers with children under age six participated in the labor force at a rate of 58 percent; with children ages 6 to 17 at 68 percent; and with only school-age children at 73 percent (Adams & Schulman, 1998).

Of those women who do leave work to have children more than half return to the labor force when the child is one year old or younger. By the time the youngest child is three years old, at least six out of every ten mothers have entered or returned to the labor force (WOW, 1998).

In 1996, 29 percent of all mothers in the labor force who had children younger than six were single parents (Adams & Schulman, 1998).

In 1998, 4.2 million men were multiple jobholders compared with 3.7 million women (U.S. DOL, 1999).

In 1990, 7.2 million mothers with 11.7 million children under age 15 worked full- or part-time during nonstandard hours. About 8 percent to 9 percent of mothers worked evenings or nights (CFC, 1996).

In 1990, almost half of working poor parents* worked on a rotating or changing schedule, compared to one-quarter of working-class and middle-class mothers and one-third of working-class and middle-class fathers. One-third of the working poor and one-quarter of working-class mothers surveyed in the 1990 National Child Care Survey worked weekends (CFC, 1996).

Roughly one in ten workers are in nontraditional staffing arrangements such as independent contractors or agency temporary workers. Full-time, independent contractors earn more than average traditional workers do, but agency temp workers earn less ($329/week) (U.S. DOL, 2000).

Median weekly earnings for full-time wage and salary workers in 1998 were $598 for men and $456 for women. (Women earned 76 percent of what men earned.) White women at $468, continue to earn more than black women ($400) and Hispanic women ($337). White women's earnings were identical to black men's and higher than that of Hispanic men ($390) (U.S. DOL, 1999).

The top 10 percent of full-time workers now average almost $1200 per week in earnings while the bottom 10 percent average only $275 (U.S. DOL, 2000).

A national study found that 55 percent of working women provide half or more of their household income (Adams & Schulman, 1998).

About half of America's families with young children earn less than $35,000 per year (Adams & Schulman, 1998).

continued

*Working poor parents have income less than the poverty line; working-class families have incomes above the poverty level but less than $25,000 per year; middle-class families have incomes $25,000 per year or higher.

More than one in three women who maintain families work full time but earn less than poverty level income (Taeuber, 1991).

Fourteen percent of white families, 47 percent of black families, and 24 percent of Hispanic families were maintained by women in 1997. Twenty-three percent of all families with children under age 18 were maintained by women (U.S. DOL, 1999).

The top 20 jobs for women in Ohio (in terms of greatest numbers employed) are concentrated in clerical, health, retail, and service occupations such as childcare and housekeeping services. Only three of the top 20 (elementary school teachers, LPNs and registered nurses) are occupations that pay enough to support a family (Gove & Thompson, 1995).

Women tend to choose careers in only 20 of over 400 job categories (AAUW Education Foundation, 1998).

Top Five Occupations for Ohio Men and Women

The top five occupations for Ohio men (in terms of greatest number employed) are:

- Salaried managers and administrators
- Truck drivers
- Salaried supervisors and proprietors sales
- Janitors and cleaners
- Assemblers

The top five occupations for Ohio women (in terms of greatest number employed) are:

- Secretaries
- Cashiers
- Elementary school teachers
- Registered nurses
- Nursing aides, orderlies, and attendants

Source: Bureau of the Census, 1993.

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For more information contact Gender Equity, Ohio Career-Technical and Adult Education, Ohio Department of Education, 65 S. Front St., Columbus, OH 43215-4183; (614) 644-6238.

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What Skills are Needed for the Workforce?

Research

The Secretary's Commission on Achieving Necessary Skills (SCANS) estimates that less than half of all young adults have achieved reading and writing minimums; even fewer can handle the mathematics; and schools today only indirectly address listening and speaking skills (SCANS, 1991).

In 1998, 36 percent of the job applicants taking employer-administered tests lacked the math and reading skills necessary for the jobs for which they were applying (DOL, 2000a).

Many colleges have over 69 percent of entering freshmen taking one or more remedial courses, typically in English and math (Gray & Herr, 1995).

About one Ohio high school senior in every 14 (or 7 percent) meets the skill requirements in applied math, applied technology, reading for information, and locating information needed for 80 percent of the jobs profiled (as represented by Ohio's present and future needs for skilled entry-level workers) (ODE & OBR, 1998).

Fifty-four percent of Ohio high school seniors surveyed in the Ohio Skills Gap Study scored below the minimal skill level employers require in applied technology (solving problems of a technological nature such as applying principles of mechanics, electricity, thermodynamics, or fluid dynamics to machines and systems) (ODE & OBR, 1998).

By the year 2000, 95 percent of all workers will use some type of technology on their jobs (Twigg and Oblinger, 1996).

Understanding and applying written and visual information, mastering new technologies, and using mathematical reasoning in solving problems are becoming fundamental workplace skills—even in many entry-level jobs. Every employee's ability to locate information, anticipate and prevent problems, redesign inefficient work processes, and function as a team member is a competitive asset (ODE & OBR, 1998).

The average worker will have six to seven different careers in their lifetime (Forman, 1995).

In five years, almost half of all workers will be employed in industries that produce or are intensive users of information technology (DOL, 2000a).

In an estimate by the National Science Foundation, by the year 2010 we will need more than 700,000 additional scientists and engineers (AAUW, 1991).

continued

Work-related Skills And Attitudes Necessary In Today's Workforce

- Cooperative skills
- Individual responsibility
- Self-management
- Self-esteem
- Interpersonal relationships
- Communications
- Conflict management
- Problem solving
- Critical thinking
- Adaptation to change
- Teamwork

Source: Stasz, Ramsey, & Eden, 1995; SCANS, 1991

Recommendations

- Offer programs that mirror local labor market needs.
- Make sure that new programs are designed for a wide variety of students, not just a select few.
- Collaborate with school staff, employers, and community service providers to broaden students' career pathways.
- Present career clusters in a way that equitably showcases possible pathways and future entry, technical, and professional careers within each career cluster.
- Offer multiple opportunities for students to explore career cluster areas.
- Prepare students for postsecondary education and careers, not just those careers traditionally acceptable for their gender.
- Eliminate separate vocational and college-prep tracks in favor of organizing the high school curriculum by career cluster.
- Have all students participate in rigorous academics and career-focused education.
- Educate all students to be technologically literate.
- Integrate academic and technical skills throughout the curricula.
- Incorporate applied mathematics, reading for information, applied technology, and locating information throughout the curricula.
- Use Integrated Technical and Academic Competencies (ITACs) as a resource for incorporating SCANS skills into instruction.
- Use *Developing Gender Equity Competencies** to teach work-related skills and attitudes.

**Developing Gender Equity Competencies* are available through the Center for Education and Training for Employment, 1900 Kenny Road, Columbus, Ohio 43210-1090; (614) 292-4277 or (800) 848-4815.*

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How Do Students' Career Aspirations Compare to Labor Market Realities?

Research

More than 90 percent of high school seniors expect to attend college, and more than 70 percent expect to work in professional jobs (Schneider & Stevenson, 1999).

Of the 1992 high school graduates surveyed in the National Educational Longitudinal Study of 1988 (NELS 88), 68.8 percent of females said they expected to be working in the professions by the time they were 30 years old, compared with 48.8 percent of males. Of particular note, only 0.4 percent expected to be working in precision metal/crafts/specialized repair occupations, and 3.7 percent expected to be working as technicians (Gray & Herr, 1995).

Six times more adolescents want to be doctors and five times more want to be lawyers than there are projected to be openings in these professions (Schneider & Stevenson, 1999).

Almost half of the teenagers in the Sloan Study for Youth Development hope to get degrees that exceed the credentials needed for the occupations they want. Only 16 percent expect to obtain less education than the average worker in the occupation they aspire to does. Over 43 percent of the teenagers expect to attain as much education as the average worker in the job they desire (Schneider & Stevenson, 1999).

In the same study, students who aspired to be doctors, lawyers, judges, and college professors were most likely to underestimate the amount of education required for their job choice. Students who aspired to be engineers, architects, natural and social scientists, writers, artists, entertainers, and athletes were most likely to overestimate the amount of education they would need (Schneider & Stevenson, 1999).

The U.S. Bureau of Labor statistics forecasts that, through the year 2005, 1 in 3 college graduates will not find college-level employment; among those preparing for the professions, this number will be 1 in 2 (Gray & Herr, 1995).

By the year 2000, 15 percent of all jobs will be unskilled, 20 percent will require a professional degree (bachelor's degree or higher), and more than 65 percent of all jobs will require specific skills demanding specialized education—that is, more than a high school diploma but less than a four-year college degree (Brustein & Mahler, 1994).

For youth who do not attend college, there is some evidence that more rigorous academic programs of study in high school lead to higher rates of employment, higher wages, or higher-status jobs (Gamoran, 1994 in National Science Board, 1996).

The largest and fastest-growing segments of the emerging technical workforce are occupations that do not require a 4-year college degree (Gray & Herr, 1995).

continued

Ten Fastest Growing Occupations, 1998-2008

- Computer engineers
- Computer support specialists
- Systems analysts
- Database administrators
- Desktop publishing specialists
- Paralegals and legal assistants
- Personal care and home health aides
- Medical assistants
- Social and human service assistants
- Physician assistants

Source: U.S. DOL, 2000b

Females represent only 9 percent of the labor force in craft, precision metals, and specialized repair occupations which comprise the second highest paid occupational group as identified by the U.S. Bureau of the Census (Gray & Herr, 1995).

In the labor market, above-average wages are a result of occupational skills in demand, not education per se (Gray & Herr, 1995).

Surveys of employers have not revealed that they prefer college graduates for jobs that do not require a degree. In particular, college graduates will not displace nondegree holders who have specialized occupational skills (Gray & Herr, 1995).

Recommendations

- Counsel students in developing realistic career plans that meet their interests and abilities, along with projected labor market needs.
- Have all students participate in rigorous academics and career-focused education.
- Prepare students for postsecondary education and careers, not just those careers traditionally acceptable for their gender.
- Help students align their interests and abilities with appropriate courses, including the educational pathways to obtain employment in specific careers.
- Encourage students, especially females, to look beyond traditional careers and explore other careers that match their interests and abilities.
- Offer multiple opportunities for students to explore career cluster areas.
- Present career clusters in a way that equitably showcases possible pathways and future entry, technical, and professional careers within each career cluster.
- Collaborate with school staff, employers, and community service providers to broaden students' career pathways.
- Make sure that new programs are designed for a wide variety of students, not just a select few.

Ten Occupations With The Largest Job Growth, 1998-2008

- Systems analysts
- Retail salespersons
- Cashiers
- General managers and top executives
- Truck drivers (light and heavy)
- General office clerks
- Registered nurses
- Computer support specialists
- Personal care and home health aides
- Teacher assistants

Source: U.S. DOL, 2000b

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